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EXHIBIT 3

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2019-xxxx

WASTE DISCHARGE REQUIREMENTS FOR
OIL FIELD DISCHARGES TO LAND
VALLEY WATER MANAGEMENT COMPANY
MCKITTRICK 1 & 1-3 FACILITY
KERN COUNTY

The California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board or Board), finds that:

Facility

1. Valley Water Management Company (hereafter "Valley Water") owns and operates two interconnected systems of unlined ponds on approximately 163 acres used for oil field produced water evaporation and percolation. The McKittrick 1 & 1-3 (Facility) is comprised of the McKittrick 1 pond system, which occupies the west side of the Facility and is slightly higher in elevation than the McKittrick 1-3 pond system, which occupies the east side of the Facility. The Facility sits at an elevation of approximately 500 feet (ft) above mean sea level (AMSL) on a 593-acre parcel (Assessor Parcel No. 099-290-19-00-1). The Facility and its monitoring well network are in Sections 17, 19, and 21 of Township 29 S, Range 22 E, Mt. Diablo Baseline and Meridian, in the southwestern San Joaquin Valley. While the Facility is not within an oil field, the Facility lies over oil field reservoirs that are being actively produced, and sits just outside the boundaries of South Belridge, Monument Junction, and Cymric Oil Fields, approximately 4.5 miles north of the community of McKittrick, and approximately 8.7 miles west of the community of Buttonwillow. Oil production occurs cross gradient and down gradient to the Facility ponds and is being produced from the Tulare formation.

2. Valley Water's February 2019 self-monitoring report indicates produced water enters the Facility though a single pipeline. About 42,000 barrels of produced water per day (bpd) or 1.8 million gallons per day (gpd) were discharged to the 83 unlined ponds at the Facility in 2018. Reported discharge rates from 2015 through 2018 have varied from 105,000 barrels per day (bpd) (4.4 million gpd) to 38,000 bpd (1.6 million gpd) with an average of a little over 59,000 bpd (2.5 million gpd). Aerial photographs of the McKittrick 1 & 1-3 Facility and a close-up showing the Administrative Boundaries of nearby oil fields are attached hereto as **Attachment A**.

3. The produced water at the Facility contains high levels of salts, boron, and some organic compounds and has created a groundwater mound and salinity plume that may be migrating to the northeast.

Facility Regulation

4. Facility discharges are currently regulated under Waste Discharge Requirements (WDRs) Resolution No. 69-199, adopted by the Central Valley Water Board on 14 February 1969, which prescribes requirements for discharges to unlined ponds of non-hazardous produced water from Belgian Anticline, Cymric, and McKittrick Oil Fields.

5. Resolution No. 69-199 predates the Water Quality Control Plan for the Tulare Lake Basin, Third Edition, May 2018 (hereafter Basin Plan) and does not contain the Basin Plan generally applicable effluent limits for oilfield discharges to unlined ponds of 1000 µmhos/cm for electrical conductivity, 200 mg/L for chloride, and 1 mg/L for boron. The Basin Plan does allow the Board to authorize discharges of oil field produced water exceeding these effluent limits if the discharger successfully demonstrates in a public hearing that the proposed discharge will not substantially affect water quality nor cause a violation of water quality objectives. Exceptions from the EC and/or the chloride limit may also be permitted consistent with the Basin Plan Program for Exceptions from Implementation of Water Quality Objectives for Salinity, and the Basin Plan amendments adopted pursuant to the CV-SALTS Salinity Management Program.

6. The Facility is in Kern County Basin Hydrologic Unit, Detailed Analysis Unit (DAU) 159. The designated the beneficial uses of the groundwater, as specified in the Basin Plan are municipal and domestic supply (MUN), agricultural supply (AGR), and industrial service supply (IND).

7. On 4 April 2018, the Board's Executive Officer issued Monitoring and Reporting Program R5-2018-0808 (MRP) to Valley Water for the Facility. The MRP required Valley Water to submit by 4 June 2018 a Monitoring Well Installation and Sampling Plan (MWISP) for additional groundwater monitoring wells to fully delineate the extent of the produced water mound and groundwater plume from the Facility's ponds. The MRP expands on the internal program that Valley Water was doing on a voluntary basis.

8. On 5 April 2018, the Board adopted Resolution R5-2018-0015 (Resolution), which directed staff to take appropriate action to determine whether Valley Water's Facility should be regulated under Order R5-2017-0035, *Waste Discharge Requirements General Order for Oil Field Discharges to Land General Order Number Two*, or Order R5-2017-0036, *Waste Discharge Requirements General Order for Oil Field Discharges to Land General Order Number Three*, or whether Valley Water should be directed to submit for a report of waste discharge for individual waste discharge

requirements. That resolution specifically stated: "Compliance options may include a consideration of the policies currently under development through the CV-SALTS initiative."

9. During the hearing, the Board contemplated that, due to siting constraints, it would take approximately one year to obtain additional groundwater monitoring and other data required by MRP R5-2018-0808 necessary to determine an appropriate course of action to regulate the Facility. It was also expected that the two 2018 SMRs would include data from additional monitoring wells and select monitoring wells upgradient from the Clean Harbors Buttonwillow, Inc., facility (Clean Harbors), which is approximately 1.7 miles down structure and down gradient of the Valley Water Facility.

10. Valley Water timely submitted the MWISP to the Central Valley Water Board on 4 June 2018, and Board staff provided on 27 July 2018 conditional approval for Valley Water to implement the MWISP. After receiving the July 27 comment letter from the Central Valley Water Board regarding the MWISP, Valley Water submitted a modified MWISP to the Central Valley Water Board on 27 August 2018.

11. In response, on 13 September 2018, the Executive Officer issued Valley Water another conditional approval, including a time schedule pursuant to Water Code section 13267 (13267 Order). The intent of the 13267 Order was to establish a definitive time schedule for Valley Water to complete groundwater monitoring wells to further assess the downgradient extent of its produced water plume. The Assistant Executive Officer also assisted Valley Water gain approval from Clean Harbors to obtain the needed data, and met with Valley Water and the biological agencies responsible for endangered species protection to help facilitate more rapid monitoring well installation.

12. On 3 October 2018, Valley Water submitted an updated Biological Assessment (Assessment) of the proposed monitoring well locations. The Assessment stated that a new biological assessment survey (Survey) was required and necessary for all proposed monitoring well locations, and the Survey would take approximately one year, followed by a period of consultation with California Department of Fish and Wildlife. The Assessment states the time required to conduct the Survey would prevent Valley Water from complying with items in the 13 September 2018 13267 Order. Valley Water is prohibited from drilling wells in endangered species habitat without the proper state or federal approvals and few to any areas where monitoring wells would be beneficial are not in protected habitat.

13. Valley Water has had difficulties in implementing the conditionally approved MWISP due to delays in timely obtaining needed approvals from Clean Harbors to sample or receive data from Clean Waters' wells, and due to the inability to drill new wells due to endangered species issues. For these reasons, the two 2018 Semi-Annual Reports for the Facility did not include groundwater monitoring data from additional wells or from the Clean Harbors' monitoring wells. Due to these regulatory difficulties experienced by Valley Water, the additional monitoring wells have not yet been installed to further investigate the lateral and vertical extent of the saline plume generated by discharges to the Facility's ponds. Without that data, it is not possible to definitively determine if the regional aquifer is increasing in concentrations of constituents of concern associated with produced water discharges to the ponds.

LAND USE AND HYDROGEOLOGY

14. Land use near the site is a mixture of undeveloped land, oil production and industrial areas, and agricultural uses. The closest agricultural land is adjacent to Lokern Road, approximately 1,600 feet north of the Facility. The Clean Harbors' facility is approximately 1.7 miles northeast of the Valley Water Facility.

15. Agricultural land sits 1,600 feet north of the Facility and several miles to the east of the Facility. Agricultural wells in the vicinity downgradient of the Facility have total dissolved solids (TDS) concentrations ranging from 2,300 mg/L to 6,800 mg/L. Starrh Family Farms LP owns and operates these wells, and they are reportedly important for operations when surface water deliveries are in short supply and were reportedly impacted by different produced water operations by another oil company. The use of these wells indicates that the AGR beneficial use designated in the Board's Basin Plan may be an existing use at some point downgradient of the Valley Water Facility.

16. The hydrogeology of the Facility site is complex and the stratigraphy and the effects of the depositional environment on the stratigraphy is summarized in the next five findings.

17. The Facility sits on Holocene age alluvium and is just east of the Cymric and Monument Junction oil fields and south of the South Belridge oil field, as shown on Attachment A. The topography slopes about 30 feet per mile from the west-southwest to the east-northeast. The alluvium and underlying stratigraphic intervals structurally dip from the southwest to the northeast. The alluvium comprises alluvial fan sediments that consist of interbedded layers of poorly sorted, relatively coarse grained, subangular to angular sands with silts and clays. Subangular to angular

gravely sands also occasionally occur within the fan sediments. Due to their depositional environment, the sands are heterogeneous and anisotropic, possibly channelized, and can be highly permeable.

18. Beneath the alluvium is a silty clay to clay bed called the Corcoran Clay Equivalent (CCE) that separates the alluvium from the Pleistocene age Tulare Formation. As described in Valley Water's hydrogeologic reports, the CCE in the vicinity of the Facility does not act as a significant barrier to the downward migration of produced water. Valley Water's SMRs depict a produced water plume directly beneath the ponds that has migrated below the CCE and into underlying Tulare Formation sediments.

19. Beneath the CCE is the upper Tulare or upper Tulare sand. The upper Tulare interval is comprised of deposits that vary greatly from fine grained lacustrine (lake) deposits to coarser-grained channel deposits. The deposits are comprised of fine-grained sands with interbedded silt and clay layers and gravels. Prior to the start of percolation, this zone was dry/unsaturated beneath the facility.

20. Beneath the upper Tulare interval is the dense and stiff upper Tulare clay bed. This mappable unit separates the upper Tulare from the deeper Tulare interval. The deeper Tulare interval is composed primarily of fine-grained to medium-grained sands. Groundwater within this zone is part of the regional aquifer that supplies water supply wells several miles to the east.

21. The upper Tulare clay and, where present, the CCE, may not be laterally continuous layers as shown in the Valley Water cross sections. The upper Tulare clay and CCE may be erosionally cut by overlying fluvial channels that contain permeable coarse sands and gravels deposited during high energy storm events. These repeated depositional events, typical for alluvial fan systems underlain by lacustrine (lake deposits) sediments, could compromise the integrity of the upper Tulare clay bed and prevent it from being an effective aquitard.

SCOPE OF THE ORDER

22. This Order applies to:

    a. Discharges of produced water from oil and gas extraction operations to land, including but not limited to ponds;

    b. Produced water discharges that may exceed the oil field discharge salinity limits of 1,000 µmhos/cm Electrical Conductivity (EC), 200 mg/L chlorides, and 1 mg/L boron contained in the Implementation Plan for the *Water Quality*

Control Plan for the Tulare Lake Basin, Second Edition, Revised January 2015 (Basin Plan);

c. Discharges where the first encountered groundwater is of poor quality or there is or historically was no first encountered groundwater;

d. Discharge where the first encountered groundwater does not support beneficial uses as identified in Basin Plan as Municipal and Domestic Supply (MUN), or Agricultural Supply (AGR), or Industrial Service Supply (IND) or Industrial Process Supply (PRO).

23. This Order will also provide coverage for discharge of oil field produced water to ponds and to land for dust control and construction activities. This Order does not provide coverage for oil field produced water discharges for crop irrigation.

24. For the purposes of this Order, "produced water" means formation water pumped from an oil or gas well and discharged to land. Produced water may also include water, precipitation, or rainfall runoff that contacts produced water or residual oil field wastes in the production facility.

25. Discharges regulated under this Order are for discharges where there would be no directly underlying groundwater without the discharge and where the poor quality of underlying groundwater precludes beneficial use and would support non-designation, or removal or modification of designated beneficial uses through Basin Plan amendments.

BASIN PLAN AND BENEFICIAL USES

26. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition, Revised January 2015* (Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board (State Water Board).

27. Chapter II of the Basin Plan designates the beneficial uses of groundwater to include MUN, AGR, IND, PRO, REC-1, and WILD. Table II-2 of the Basin Plan lists specific designated beneficial uses of groundwater within each Detailed Analysis Unit of the Basin. Further, the Basin Plan incorporates State Water Board Resolution 88-63, known as the State "Sources of Drinking Water Policy" through Regional Board Resolution No. 89-98. Pursuant to this policy, all groundwater that did not meet the specified exceptions was designated as MUN (the use may be

existing or potential). In addition, unless demonstrated to be unsuitable or unless otherwise designated by the Central Valley Water Board, ground water in the Region is generally considered suitable or potentially suitable, at a minimum, for agricultural supply (AGR), industrial supply (IND), and industrial process supply (PRO).

28. Though Basin Plan Table II-2 lists the designated beneficial uses within the listed Detailed Analysis Units (DAUs), due to their sizes, the listed uses may not exist throughout the DAUs.

29. Pursuant to Water Code section 13263(a), this Order must implement the Basin Plan including consideration of the beneficial uses of water to be protected, the water quality objectives reasonably required for protection of those beneficial uses, other waste discharges, the need to prevent nuisance conditions, and the provisions of Section 13241. Water quality objectives are the limits or levels of water quality constituents or characteristics that are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area (Water Code, section 13050(h)).

30. Water quality objectives are listed separately for surface water and groundwater in Chapter III of the Basin Plan and are either numeric or narrative. The water quality objectives implemented in this Order are consistent with the Basin Plan's Policy for Application of Water Quality Objectives, which specifies that the Central Valley Water Board "will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives." To derive numeric limits from narrative water quality objectives, the Board considers relevant numerical criteria and guidelines developed and/or published by other agencies and organizations.

31. Water quality objectives that apply to groundwater depend on the existing and designated uses of the groundwater and can include (1) numeric objectives, including the bacteria objective and the chemical constituents objective (incorporating State maximum contaminant levels (MCLs) promulgated in CCR, title 22, sections 64431, 64444, and 64449) applicable through the Basin Plan to existing municipal and domestic supply uses, and (2) narrative objectives including the chemical constituents, taste and odor, and toxicity objectives. The Basin Plan includes salinity objectives for groundwater.

32. Chapter III of the Basin Plan under Water Quality Objectives for groundwater for salinity, states:

All ground waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use and management of water resources, except for those areas with specific beneficial use exceptions as listed in Table 2-3.

No proven means exist at present that will allow ongoing human activity in the Basin and maintain ground water salinity at current levels throughout the Basin. Accordingly, the water quality objectives for ground water salinity control the rate of increase.

The maximum average annual increase in salinity measured as electrical conductivity shall not exceed the values specified in Table 3-4 for each hydrographic unit shown on Figure 3-1, except for those areas with specific beneficial use exceptions as listed in Table 2-3.

The average annual increase in electrical conductivity will be determined from monitoring data by calculation of a cumulative average annual increase over a 5-year period.

33. In 1988, the State Water Board adopted the Sources of Drinking Water Policy (Resolution No. 88-63) to implement Proposition 65. This resolution stated that, except for certain exempt waters, all groundwaters of the State are considered to be suitable, or potentially suitable, for municipal or domestic water supply and should be so designated by the Regional Board. Regional Board Resolution No. 89-098 designated all groundwater as MUN, *except* where the groundwater met or meets one or more of the following criteria:

    a. The total dissolved solids (TDS) exceed 3,000 milligrams per liter (mg/L) (5,000 micromhos per centimeter (µmhos/cm) electrical conductivity) and it is not reasonably be expected by the Regional Boards to supply a public water system; or

    b. There is contamination, either by natural processes or by human activity (unrelated to a specific pollution incident), that cannot reasonably be treated for domestic use using either Best Management Practices or best economically achievable treatment practices; or

    c. The water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day; or

    d. The aquifer is regulated as a geothermal energy producing source or has been exempted administratively pursuant to 40 CFR, section 146.4 for the purpose of underground injection of fluids associated with the production of hydrocarbon or geothermal energy, provided that these fluids do not constitute a hazardous waste under 40 CFR, section 261.3.

The exceptions in a. and b. above would arguably apply to the groundwater under and around the Facility and would likely have applied in 1989 when Resolution No. 89-98 was adopted.[1]

34. In designating uses and making exceptions to beneficial uses designations other than MUN (e.g., AGR, IND or PRO), the Central Valley Water Board considers similar criteria for exceptions, parallel to Resolution No. 89-098 exception criteria, as applicable.

35. The Basin Plan's Implementation Plan generally requires the following salinity limits (effluent limits) for specific waste constituents for discharges of oil field wastewater to unlined ponds overlying groundwater with existing and future probable beneficial use:

Constituent	Limitation
Electrical Conductivity (EC) (µmhos/cm)	1000
Chloride (mg/L)	200
Boron (mg/L)	1

However, the Basin Plan salinity limits could be argued not to apply to this Facility because the groundwater underlying the Facility is of poor quality and exceeds the Basin Plan salinity limits and water quality objectives. Nevertheless, the Facility must control discharges to protect useable downgradient groundwater from being degraded due to the discharge, and this Order contains requirements for that purpose.

ANTIDEGRADATION POLICY / BASIN PLAN AMENDMENTS

36. State Water Board Resolution 68-16, the Statement of Policy with Respect to Maintaining High Quality of Waters in California (hereafter, the State Antidegradation Policy), requires that disposal of waste into high quality waters of the State be regulated to achieve the highest water quality consistent with the

[1] The Regional Board has already determined that "Ground water and spring water within 1/2 mile radius of the McKittrick Waste Treatment (formerly Liquid Waste Management) site in Section 29, T30S, R22E, MDB&M, are not suitable, or potentially suitable, for municipal or domestic supply (MUN)." Tulare Lake Basin Plan at Table 2-3.

maximum benefit to the people of the State. Resolution 68-16 does not apply to waters that are not high quality.

37. This Order applies to areas where first encountered groundwater has been of such poor quality since before 1968 that the underlying groundwater does not, and could not be reasonably expected to support beneficial uses.

38. As described above, the Basin Plan generally applied the MUN use to all groundwater where the groundwater was not specifically designated unless one of the exceptions applied. The Basin Plan also states that unless otherwise designated by the Regional Water Board, all groundwater in the Region are considered suitable or potentially suitable for AGR, IND, and PRO. Hydrogeological conditions, particularly in and near the oil fields on the west side of Kern County, have resulted in areas where first encountered groundwater is petroleum or hydrocarbon producing and/or is of such poor quality that it cannot reasonably be expected to be used, now or in the future, for the Basin Plan assigned beneficial uses, even with the implementation of currently available and feasible best management practices or best economically achievable treatment practices.

39. Under these circumstances, Valley Waters is expected to apply "best efforts" to minimize water quality degradation and prevent or minimize offsite conditions of pollution or nuisance. Also, under these circumstances, Valley Water should seek amendments to the Basin Plan that officially de-designate the beneficial uses that cannot reasonably be achieved and seek an Exception to any applicable water quality objectives or salinity limits.

40. The "best efforts" approach involves implementation of reasonable control measures to treat produced water prior to discharge to land. The factors that should be analyzed under the "best efforts" approach include the water quality achieved by other similarly situated dischargers, the good faith efforts of Valley Water to limit the discharge of constituent of concerns (COCs), and the measures necessary to achieve compliance. The "best efforts" approach is considered where the underlying groundwater is "poor quality" and is temporary while Basin Plan amendments are sought or other plans are implemented.

41. The primary waste constituents of concerns (COCs) related to discharges of produced water from oil field facilities with respect to groundwater are elevated concentrations of salts (especially total dissolved solids (especially TDS, EC, chloride, and boron). In addition, produced water can contain metals (e.g., arsenic), petroleum hydrocarbons, polynuclear aromatic hydrocarbons (PAHs),

volatile organic compounds (VOCs, e.g., benzene, toluene, ethylbenzene, and xylenes [BTEX]), radionuclides, and possibly nitrates.

42. Constituent ranges for Valley Water groundwater monitoring data from 2002 through 2018 are summarized in Table 3 along with the Basin Plan's general effluent limits for oil field discharges to land and the State drinking water MCLs. The quality of some of this groundwater presumably has been in these ranges since the Facility began discharging in the 1950s.

Table 3 Groundwater Quality Data

Well ID	EC (µmhos/cm) Range	TDS (mg/L) Range	Chloride (mg/L) Range	Boron (mg/L) Range	BTEX (µg/L)			
					Benzene	Toluene	Ethyl-benzene	Xylenes
CYM-19HI	8500-23000	10500-14000	4120-5700	30-41	0.65-0.79	ND[1]	ND	ND
CYM-17N1	10900-33000	7450-18000	2700-8000	20-76	0.53	ND	ND	ND
CYM-17K1	18000-28000	16000-18000	6000-8000	55-68	ND	ND	ND	ND
CYM-17M1	15840-24350	12000-16000	4900-7000	40-55	0.27	ND	ND	ND
CYM-17Q1	13000-22600	13000-16000	4800-5900	45-60	ND	ND	ND	ND
CYM-21D1	1970-11000	1200-10000	334-2900	2.5-22	0.62	ND	ND	ND
Basin Plan limits[2]	1000	-	200	1	-	-	-	-
MCLs[3]	900/1600/2200	500/1000/1500	250/500/600	-	1	150	300	1750

1. ND = not detected above laboratory reporting limit. Prior to 2018, reporting limits for benzene, toluene, ethylbenzene, and total xylenes (BTEX) was 2.0 ug/L. Subsequently, the reporting limit has been 0.5 ug/L.
2. Basin Plan = Water Quality Control Plan for the Tulare Lake Basin, Third Edition, which prescribes general limits for oil field discharges to land.
3. MCLs = maximum contaminant level. The MCLs for benzene, toluene, ethylbenzene, and total xylenes (BTEX) are Primary MCLs and have single numerical limits. The MCLs for electrical conductivity, chloride, and total dissolved solids are Secondary MCLs or "Consumer Acceptance Contaminant Level Ranges" and three different values are shown; the first number is the "Recommended" MCL, the second number is the "Upper" MCL, and the third number is the "Short term" MCL. MCLs only directly apply to finished drinking water supplies and existing MUN uses.

43. This Order puts Valley Water on a compliance schedule (Provision E.6) to either:

    a. Demonstrate with modeling and monitoring that discharges could continue until a determined end date in the future (e.g., 2050) without substantial additional adverse downgradient impacts; or

    b. Obtain an amendment or amendments to the Basin Plan to de-designate the beneficial uses of MUN, AGR, IND, or PRO as appropriate, or demonstrate that the exceptions set forth in Resolution 89-098 applied in 1989 such that the MUN and other uses were not designated by that Resolution. In this alternative, the compliance schedule requires Valley Water to demonstrate, in the case of MUN, that the Sources of Drinking Water Policy exception criteria in Resolution 89-98 were met in 1989, or in the case of AGR, IND, and PRO uses, the parallel criteria were met. If the criteria were not met in 1989, then Valley Water must ask for a de-designation since the groundwater was then presumptively designated in 1989.The compliance schedule also requires that Valley Water demonstrate, where the above exception criteria are met, that its discharges will not migrate from the areas where the beneficial uses were not designated, or will be de-designated, to areas of higher quality groundwater and unreasonably impact that useable water under the factors set forth in Water Code section 13263 and the Antidegradation Policy. The compliance schedule may be extended by the Executive Officer if, through no fault of Valley Water, any required Basin Plan amendments or de-designation processes are delayed.

44. If Valley Water is unable to make the needed demonstration or obtain the amendments to the Basin Plan necessary to continue discharge by the end of the compliance schedule, the discharge must cease unless Valley Water, prior to the expiration of the compliance schedule, can otherwise obtain other regulatory relief (potentially through the CV-SALTS program), or can attain any water quality objectives applicable at that time. The compliance schedule is reasonable and provides time for new technologies to be tested and possibly be implemented.

45. Valley Water may also submit an application for an exception from water quality objectives related to salinity pursuant to Chapter IV, Exception to Discharge Requirements Related to the Implementation of Water Quality Objectives for Salinity, paragraph 8 of the Basin Plan. The application must provide justification as to why the exception would be necessary and beneficial. Any discharger proposing an exception must participate in the CV-SALTS Program to qualify for an exception.

STATUTORY AND REGULATORY CONSIDERATIONS

46. Water Code section 13260(a) requires that any person discharging waste, or proposing to discharge waste, within the Central Valley Region, that could affect the quality of the waters of the State to file a report of that discharge.

47. The Central Valley Water Board generally regulates waste discharges by prescribing waste discharge requirements, which must implement the relevant water quality control plan.

48. The MRP requires extensive monitoring of the Facility, the produced water, and the groundwater. The MRP can be modified if Valley Water provides sufficient data to support the proposed changes. Any modification of the MRP must be reviewed and approved by the Executive Officer.

49. California Code of Regulations, Title 27 (hereafter Title 27) contains regulatory requirements for the treatment, storage, processing, and disposal of solid waste, which includes designated waste, as defined by Water Code section 13173. However, Title 27 exempts certain activities from its provisions. Discharges regulated by this Order are exempt from Title 27 pursuant to provisions that exempt wastewater under specific conditions. This exemption, found at Title 27, section 20090 is described below:

* * *

(b) Wastewater - Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met:

(1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance;

(2) the discharge includes an approved timeline for compliance with the applicable water quality control plan; and

(3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

* * *

50. The discharges authorized herein are exempt from the requirements of Title 27 in accordance with Title 27, sections 20090(b) because:

a. The Central Valley Water Board is issuing this Order as a WDR,
b. Discharges made under the WDR will be on an approved schedule for compliance with the Basin Plan, and;
c. The produced water discharged does not need to be managed as hazardous waste.

51. New regulations in CCR, title 14, concerning well stimulation treatment went into effect on 1 July 2015. These regulations may or may not apply to the discharges regulated herein, depending on if the produced water comes from stimulated wells.

52. CCR title 14, section 1761(a) defines well stimulation treatment as treatment of a well designed to enhance oil and gas production or recovery by increasing the permeability of the formation. Examples of well stimulation treatments may include hydraulic fracturing, acid fracturing, and acid matrix stimulation. Well stimulation treatment does not include routine well cleanout work; routine well maintenance; routine treatment for the purpose of removal of formation damage due to drilling; bottom hole pressure surveys; routine activities that do not affect the integrity of the well or the formation; the removal of scale or precipitate from the perforations, casing, or tubing; a gravel pack treatment that does not exceed the formation fracture gradient; or a treatment that involves emplacing acid in a well and that uses a volume of fluid that is less than the Acid Volume Threshold for the operation and is below the formation fracture gradient.

53. CCR, title 14, section 1786(a) states that operators shall not store well stimulation treatment fluids, including produced water from a well that has undergone well stimulation treatment, in sumps or pits.

54. Pursuant to Senate Bill 4 (Pavley 2013), the California Natural Resources Agency commissioned the California Council on Science and Technology (CCST) to conduct an independent scientific assessment of well stimulation treatments, including hydraulic fracturing, in California. CCST's assessment concluded that produced water from stimulated wells will contain well stimulation chemicals or their reaction by-products and that reuse of produced water for irrigation of crops could be a mechanism for release of well stimulation chemicals to the environment.

55. This Order does not authorize violation of any federal, state, or local law or regulation.

56. As stated in Water Code section 13263(g), the discharge of waste into waters of the state is a privilege, not a right, and this Order does not create a vested right to continue the discharge of waste. Failure to prevent conditions that create pollution or nuisance or cause degradation can be sufficient reason to modify, revoke, or enforce this Order, as well as prohibit further discharge.

57. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and

accessible water adequate for human consumption, cooking, and sanitary purposes. This order promotes that policy by requiring discharges to ensure that groundwater used for municipal and domestic drinking water uses meets maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

58. This Order is not a National Pollutant Discharge Elimination System (NPDES) Permit issued pursuant to the Federal Clean Water Act. Coverage under this Order does not exempt the Facility from the Clean Water Act.

59. On 1 April 2014, the State Water Board adopted Order 2014-0057-DWQ (NPDES Industrial General Permit CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities. Order 2014-0057-DWQ supersedes State Water Board Order 97-03-DWQ (NPDES General Permit CAS000001) and became effective 1 July 2015. Order 2014-0057-DWQ requires all applicable industrial dischargers including oil and gas facilities to apply for coverage by that order's effective date. However, storm water at this Facility is captured and contained on-site or comingled with produced water before being discharged to the ponds in accordance with this Order. This Order prohibits the discharge from leaving the pond, secondary containment area, or entering waters of the United States. Therefore, Valley Water is not required to obtain coverage under the NPDES Industrial General Permit because industrial storm water is contained within the Facility.

60. Water Code section 13267(b) states:

> In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges or is suspected of having discharged or discharging, or proposes to discharge waste outside of its region that could affect the quality of water within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The technical reports required by this Order and the previously adopted Monitoring and Reporting Program for these facilities - R5-2018-0808 - are necessary to

ensure compliance with these waste discharge requirements. Valley Water owns and/or operates the Facility subject to this Order.

61. The California Department of Water Resources sets standards for the construction and destruction of groundwater wells (hereafter DWR Well Standards), as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 74-81* (December 1981). These standards, and any more stringent standards adopted by the State or county pursuant to Water Code section 13801, apply to all monitoring wells used to monitor the impacts of wastewater storage or disposal governed by this Order.

62. The Findings of this Order, attachments, and details in the Information Sheet, and the administrative record of the Central Valley Water Board relevant to this oil field Facility were considered in establishing the conditions of discharge.

REGULATORY FLEXIBILITY NEEDED

63. Many wastewater facilities cannot meet current Basin Plan water quality objectives, and industries struggle to comply with salinity limitations, which often places limitations on their growth and increases costs due to the management of saline waters. Since any consumptive use increases the levels of salt, the Final Staff Report for the Salt and Nitrate Control Program found that a need exists for broad-based management rather than point-by-point regulation in order to allow salt to be moved out of sensitive areas until it can be economically treated and disposed of or reused.

64. In 2006, the Central Valley Water Board, the State Water Board, and regional stakeholders began a joint effort to address salinity and nitrate problems in the region and adopt long-term solutions that will lead to enhanced water quality and economic sustainability. Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) is a collaborative basin planning effort aimed at developing and implementing a comprehensive salinity and nitrate management program. Valley Water has been an active member of CV-SALTS and the Central Valley Salinity Coalition since 2015. The Basin Plan amendments adopted as a result of this CV-SALTS support the requirements of this Order.

65. Local salt management options in areas with significant salt concerns were evaluated through CV-SALTS (SSALTS 2016). These evaluations demonstrated that the volume and mass of unmanaged salt would remain high even under scenarios where existing salt regulatory and management tools are widely adopted. A comprehensive solution to the salinity issues in the Central Valley will therefore

need to rely on both local and sub–regional solutions as well as broad region-wide projects that will export salt out of the Central Valley. Additional studies are still needed to further define the range of solutions for surface and ground waters that may be deployed within each Central Valley hydrologic region to prevent continued impacts to salt sensitive areas in the Central Valley Region.

66. In 2018, the Regional Board adopted Basin Plan amendments as a result of the CV-SALTS process. These Basin Plan amendments established a three-phased Salt Control Program, with each phase lasting 10-15 years, and identified alternative compliance pathways that allow collaborative means of addressing salt. The Basin Plan amendments may indirectly allow localized areas of groundwater basins/sub-basins that are near or over the applicable water quality objectives to be further degraded by salt and nitrate in the future since it may not be feasible to remediate all such localized areas of groundwater to assure compliance with water quality standards.

67. The Salt Control Program's adaptive management approach strategy was developed to meet the following goals:
    - Control the rate of degradation through a "managed degradation" program;
    - Implement salinity management activities to achieve long-term sustainability and prevent continued impacts to salt sensitive areas; and
    - Protect beneficial uses by maintaining water quality that meets applicable water quality objectives and pursuing long-term managed restoration where reasonable, feasible and practicable.
    - Protect beneficial uses by applying appropriate antidegradation requirements for high quality water

68. Each of the three phases can be extended up to 15 years with Executive Officer approval. Phase I consists of developing a Prioritization and Optimization Study (P&O Study), which is currently being defined and will be implemented upon the effective date of these amendments. For non-NPDES dischargers of salt, such as Valley Water, compliance with the P&O Study will be deemed as compliance with applicable basin plan requirements. This Facility may benefit from the result of the P&O Study, which might make reverse osmosis or other treatment technology more economically feasible in the future through location and funding of a valley-wide brine line, or discovery of new innovative technologies.

CALIFORNIA ENVIRONMENTAL QUALITY ACT AND PUBLIC NOTICE

69. The Central Valley Water Board is the lead agency with respect to the issuance of this Order under applicable provisions of the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).

70. The benchmark for evaluating whether this Order will have impacts on the environment is the "environmental baseline." The environmental baseline normally consists of "a description of the physical environmental conditions in the vicinity of the project at the time…environmental analysis is commenced." (CCR, title 14, section 15125(a); *Cherry Valley Pass Acres and Neighbors v. City of Beaumont* (2010) 190 Cal. App. 4th 316, 336.) The receipt of a permit application (RWD) is one event that can be used to mark the beginning of the environmental review process and therefore an appropriate date for the environmental baseline. (*Fat v. County of Sacramento* (2002) 97 Cal.App.4th 1270, 1278.). In this case, the permit development process began when the Regional Board issued a resolution in 2018 instructing staff to propose coverage under a general or individual permit and collected data and evidence to support issuance of an appropriate permit.

71. This Order is designed to maintain or enhance groundwater resources, and its application to existing production facilities is statutorily exempt from the provisions of CEQA in accordance with the following categorical exemptions:

    a. California Code of Regulations, title 14, section 15301, which exempts the "operation, repair, maintenance, [and] permitting … of existing public or private structures, facilities, mechanical equipment, or topographical features" from environmental review. This Order is limited to existing oil and gas production wastewater discharge facilities. The Order may be assigned to expansion of these facilities or new facilities if compliance with the CEQA is demonstrated by Valley Water.

    b. California Code of Regulations, title 14, section 15302, exempts the "…replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced…" This Order may require covered oil field facilities to replace or reconstruct portions of their waste management systems to ensure compliance with the Order's requirements.

    c. California Code of Regulations, title 14, section 15304 exempts "… minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry and agricultural purposes…" The Order may require operators of covered Facilities to make improvements to their waste management systems that will result in only minor alterations to land, water, and/or vegetation.

72. The Central Valley Water Board has notified interested agencies and persons of its intent to issue this Order, and has provided them with an opportunity for a public hearing and an opportunity to submit comments.

73. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the proposal to regulate discharges of wastes from existing or new oil field facilities under this Order.

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13260, 13263 and 13267 and in order to meet the provisions contained in Division 7 of the California Water Code and regulations and policies adopted thereunder; Valley Water shall comply with the following:

A. PROHIBITIONS

1. Discharge of wastes to surface waters or surface water drainage courses is prohibited.

2. Discharge of wastes other than those described herein is prohibited.

3. Discharge of waste to land other than produced water from production wells to pond(s) is prohibited unless authorized by the Executive Officer in accordance with the requirements of Provisions E. 5, 6, and 7.

4. The discharge of fluids used in "well stimulation treatment," as defined by CCR, title 14, section 1761 (including hydraulic fracturing, acid fracturing, and acid matrix stimulation) and discharge of produced water from wells that have been subject to such well stimulation treatment, to land is prohibited.

5. Acceptance, treatment, or discharge 'hazardous waste,' as defined in the CCR, title 23, section 2510 et seq., is prohibited.

6. Treatment system bypass of untreated or partially treated waste is prohibited, except as allowed by section E.2 of Standard Provisions and Reporting Requirements for Waste Discharge Requirements, dated 1 March 1991 and part of this Order.
7. Produced water overflow from pond(s) is prohibited.

8. Discharges of produced water to ponds that substantially and adversely impacts the existing use of any municipal or domestic supply well is prohibited.

B. DISCHARGE SPECIFICATIONS

1. Valley Water shall achieve compliance with this Order in accordance with the time schedule in Provision E.6.
2. The discharge flow shall not exceed the maximum design flow of the Facility's limiting unit as described by appropriate technical data.
3. The discharge shall remain within the permitted waste treatment/containment/ disposal structures at all times or, in case of emergency, within secondary containment structures.
4. All ponds shall be operated and maintained to prevent wastes from concentrating to hazardous levels.
5. Public contact with wastes shall be precluded through such means as fences or other acceptable alternatives in accordance with CCR, title 14, section 1770 (b)(1) through (b)(4).
6. Ponds shall be free of oil or effectively netted to preclude the entry of wildlife in accordance with CCR, title 14, section 1778 (d).
7. Valley Water shall operate all systems and equipment to optimize the quality of the discharge to ponds.
8. All conveyance, treatment, storage, and disposal systems including ponds, tank batteries, and other components of oil and gas production facility shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
9. Objectionable odors shall not be perceivable beyond the limits of the property where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions.
10. Pond berms shall be designed and maintained to prevent leakage caused by erosion, slope failure, or animal burrowing.
11. Valley Water shall operate and maintain all ponds sufficiently to protect the integrity of containment and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall not be less

than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, Valley Water shall install and maintain in each pond a permanent staff gauge with calibration marks that clearly show the water level at design capacity and enable determination of available operational freeboard.

12. Produced water treatment, storage, and disposal units shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

13. On or about 1 October of each year, available capacity shall at least equal the volume necessary to comply with Discharge Specifications B.8 and B.12.

14. All ponds and containment structures shall be managed to prevent breeding of mosquitoes or other vectors. Specifically:

    a. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface;

    b. Weeds shall be minimized through control of water depth, harvesting, or herbicides (All pesticide application are to be done in compliance with labeling instructions and all applicable laws and regulations);

    c. Dead algae, vegetation, and debris shall not accumulate on the water surface; and

    d. Valley Water shall consult and coordinate with any local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

15. Newly reconstructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California registered civil engineer. A post construction report by the registered civil engineer that oversaw construction shall be submitted within 60 days of completion of new construction and shall certify that the new berms and/or levees were

constructed in accordance with design specifications and are suitable for the retention of wastewater.

16. Valley Water shall monitor solids accumulation in the ponds at least every five years beginning in 2020, and shall periodically remove solids as necessary to maintain adequate water storage and capacity. Specifically, if the estimated volume of solids in any units exceeds five percent of the permitted capacity, Valley Water shall complete solids cleanout within 12 months after the date of the estimate or demonstrate that a lesser pond capacity is adequate.

17. Valley Water shall implement water quality management practices based on "best efforts," as necessary, to protect water quality and to maintain compliance in downgradient groundwater with applicable water quality objectives.

18. All precipitation and surface drainage from outside containment areas, including ponds and secondary containment structures in the oil and gas production facility (i.e., "run on") shall be diverted away from the facility unless such drainage is fully contained.

19. Applications of produced water for dust control or construction activities shall be at the minimum rates necessary to perform the intended purpose and shall be consistent with an approved management plan in accordance with Provision E.6.

20. Application of produced water at the Facility for dust control or construction activities shall be at reasonable rates to preclude creation of a nuisance and unreasonable degradation of groundwater or local surface water. Applied produced water shall not be allowed to pond onsite or runoff from the area intended for dust suppression.

C. GROUNDWATER LIMITATIONS[2]

1. The discharge of produced water shall not cause downgradient useable groundwater to contain constituents in concentrations that adversely affect the existing beneficial uses.

[2] These limitations are effective immediately unless Valley Water is in compliance with Provision E.4-6. of this Order and the requirements of Monitoring and Reporting Program R5-2018-0808, and is implementing management practices/activities on the prescribed time schedule that is as short as practicable.

D. SOLIDS DISPOSAL SPECIFICATIONS

Solids as used in this Order means the solid, semisolid, and liquid residues removed during treatment processes or accumulated in tanks, ponds, or other Facility components.

1. Solids shall be removed from screens, tanks, ponds, and other treatment units as needed to ensure optimal operation and adequate storage capacity.

2. Any handling and storage of solids shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soil in a mass or concentration that could violate the applicable groundwater limitations of this Order.

3. Solids from the facility shall be managed and disposed of in a manner approved by the Executive Officer in accordance with Provision E.7. Handling and application practices shall be designed to ensure that oil field wastes do not migrate once placed.

4. Any proposed change in solids use, storage, or disposal practices shall be reported in writing to the Executive Officer at least 90 days in advance of the change and shall be pre-approved by the Executive Officer.

5. Road mix containing tank bottoms and oily materials (also referred to as solids) shall be non-hazardous (prior to mixing) and shall not be applied on roads where seasonal storm water flows across the road and potentially washes or erodes the road mix into seasonal surface drainage course.

E. PROVISIONS

1. Valley Water shall comply with the applicable "*Standard Provisions and Reporting Requirements for Waste Discharge Requirements*," dated 1 March 1991, known as "Standard Provisions," which are hereby incorporated by reference as part of this Order.

2. Valley Water shall comply with Monitoring and Reporting Program R5-2018-0808 (MRP), hereby incorporated by reference as part of this Order, and any revisions thereto as ordered by the Executive Officer. The submittal dates of Valley Water's self-monitoring reports (SMRs) shall be no later than the submittal date specified in the MRP.

3. **By 1 August 2019**, Valley Water shall submit written certification demonstrating installation of acceptable flow metering at a location or locations to ensure the accurate measurement of all discharge flows. The certification shall be accompanied by: (1) a description of the flow metering devices installed, (2) a diagram showing their locations at the facility, and (3) evidence demonstrating that the devices were properly calibrated. An engineering alternative may be used if approved in writing by the Executive Officer.

4. Valley Water shall continue to support funding of the CV-SALTS initiative and the P&O Study throughout this Order's duration, and shall continue to participate in related stakeholder and study activities.

5. Valley Water shall maintain existing discharge concentration or loading annual average levels of salinity and boron during the duration of this Order's compliance schedule. Annual average flows shall not historic annual averages during the pendency of the compliance schedule.

6. Valley Water shall make at least one of the following demonstrations related to the groundwater under and surrounding the Facility:

    i) Demonstrate, within two years of the effective date of this Order, through modeling and additional monitoring that discharges could continue without substantial adverse downgradient impacts that were unexpected under the Basin Plan until a determined end date in the future (e.g., 2050). This demonstration presumes continued participation in CV-SALTS and the P&O Study for the next 10 years as required under Provision E.4.

ii) Demonstrate that the Sources of Drinking Water Policy, Resolution 89-098 criteria were met in 1989, and thus the MUN and other uses (AGR, IND, PRO) were not designated, *or* the Sources of Drinking Water Policy exception criteria and/or parallel to exception criteria outlined in this Order can be met (Findings 33 and 34) and thus the current Basin Plan groundwater beneficial uses should be de-designated or a use exception should be granted in accordance with the instructions from the State Water Board's precedential order of *In the Matter of the Petition of the City of Vacaville,* SWRCB Order No. WQO 2002-0015, and according to the following compliance schedule and requirements:

Task	Task Description	Due date[1]
1.	Submit evidence that the underlying groundwater at issue met the Resolution 89-098 criteria in 1989 or, alternatively, develop an outline of a Basin Plan Amendment (BPA) Work Plan for CV-Salts Technical Advisory Committee review and comment prior to submittal to the Central Valley Water Board staff for evaluation of the de-designation of Basin Plan beneficial uses of the groundwater. The Work Plan shall include: a. Consideration of Sources of Drinking Water Policy and applicable exemption criteria for MUN and applicable parallel criteria for exemption of AGR, IND, and PRO; b. Consideration of available data or how the data will be collected to evaluate and support the exemption criteria; and c. An outline of a draft proposal to de-designate the Basin Plan beneficial uses that are not applicable under the area of consideration.	**12 Months from Effective Date**
2.	Central Valley Water Board staff shall review and consider for approval the outline of BPA Work Plan.	**6 Months from Date of Task 1 Submittal**
3.	Work with Central Valley Water Board staff to develop a Work Plan describing BPA tasks that will be completed and deliverables that will be produced to support the exemptions or de-designation of the Basin Plan beneficial uses of the groundwater under consideration. The BPA tasks and resulting deliverables shall include but are not limited to: a. Delineation of the horizontal and vertical extent of the sub-basin or subject area under consideration, b. A summary of available data and analyses for each beneficial use proposed for de-designation, c. Maps, geologic cross sections, well and water quality data and any other information that are supportive of de-designation, d. A description of additional data or studies required to fill in any data gaps and support de-designation, e. A proposed Final BPA Work Plan to accomplish above tasks a-d, and f. The development of a final technical report that compiles all the information developed in tasks a-e.	**12 Months from Board Approval of BPA Work Plan Outline**

Task	Task Description	Due date[1]
4.	Central Valley Water Board staff shall review and consider for approval[2] the Final BPA Work Plan and proposed deliverables.	**6 Months from Date of Final BPA Work Plan submittal**
5.	Implement Final BPA Work Plan and submit the final technical report to the Central Valley Water Board. Valley Water shall provide quarterly progress reports.	**12 Months from Date of Board Approval of Final BP Work Plan**
6.	Central Valley Water Board staff will evaluate the final technical report and provide written directions to Valley Water for completing the: a. CEQA scoping process for the BPA, b. Developing a draft staff report for the Central Valley Water Board, and c. Preparing a final staff report for the Central Valley Water Board.	**6 Months from Date of Final Technical Report Submittal**
7.	The Central Water Board and Valley Water shall implement BPA Process including: a. Stakeholder Participation-Public review of final draft of staff report, b. Peer Review Process-Request peer reviewers to provide comments for final staff report, c. Administrative Records-Preparing record keeping tasks and staff review and comments on deliverables, d. Progress Reports-Providing periodic presentation/reports to the Board and the public on the progress of BPA and deliverables. e. Final Central Valley Water Board approval-Provide a presentation of final report to the Board for consideration, and f. Finalize Administrative Records and submit to State Water Board for consideration.	**12 Months from written approval under Task 6 above**

Task	Task Description	Due date[1]
8.	State Water Board to consider Central Valley Water Board adopted Basin Pan Amendment(s).	**As soon as practicable after Task 7 completed**
9.	Office of Administrative Law review and approval of adopted Basin Plan Amendment(s).	**As soon as practicable after Task 8 completed**
10.	Whether Basin Plan Amendments are approved or disapproved in Tasks 8, 9, or 10 above, Valley Water shall submit a Report of Waste Discharge for new waste discharge requirements either for continued operation or closure/post closure activities, accordingly. The RWD shall include an evaluation of options, that may include the following or other options: (1) cease discharge at this Facility and move discharges to another Valley Water facility(ies) or to an underground injection site(s); and (2) treat produced water prior to discharge to the ponds using latest, economically feasible treatment technologies.	**6 Months from BPA approval or denial**

1. Some compliance due dates are based on the effective date of the Order.
2. When proposing Basin Plan amendment, it is not a guarantee that it will be approved because the science has to support the amendment.
3. Central Valley Water Board in special circumstances (when significant progress has been made) can extend the compliance period s for Valley Water or others up to an additional 2 years with the written concurrence of the Executive Officer.

7. Discharges of wastes from oil field activities other than produced water from production wells to pond(s) may be authorized by the Executive Officer if Valley Water can demonstrate with appropriate data and analyses that the discharge does not pose a threat to beneficial uses of the groundwater.

8. If Valley Water desires to use produced water at the facility for dust control, onsite landscape irrigation, or in construction activities, Valley Water shall provide a proposed management plan prior to conducting such activities. The management plan shall provide:

   a. Data characterizing the quality of the produced water that will be applied,
   b. Proposed application/use methods, application rates, and proposed frequencies of application;

c. Proposed application areas shown on a scaled aerial photograph within the covered lease(s). The photograph shall show pertinent site features including, roads, ponds, production and treatment facilities, surface waters, and surface water drainages;
d. Proposed constituent loading rates;
e. A list of all management practices that will be implemented to ensure applied produced water will remain where applied and not runoff; and
f. A demonstration that the discharges will be protective of water quality and will not adversely affect the beneficial uses of surface water or underlying groundwater.

The management plan must be submitted to the Executive Officer at least **90 days** prior to the anticipated discharges. Discharges shall not occur without Executive Officer written approval of the management plan.

9. At least **180 days** prior to any solid waste removal, reuse, and/or disposal, Valley Water shall submit a solids management plan for approval by the Executive Officer. The solids management plan shall include:

a. A complete characterization of the quality and quantity of the solids.

b. For reuse:
   i. A demonstration that the solids are not hazardous as defined by CCR Title 22, et Seq.,
   ii. Proposed application areas shown on a scaled aerial photograph within the covered lease(s). The photograph shall show pertinent site features including, roads, ponds, production and treatment facilities, surface waters, and surface water drainages;
   iii. Proposed constituent loading rates;
   iv. A list of all management practices that will be implemented to ensure wastes will remain where processed and applied and not migrate from the location of application; and
   v. A demonstration that the discharges will be protective of water quality and will not adversely affect the beneficial uses of surface water or underlying groundwater.

Reuse shall not commence prior to obtaining the written approval of the solids management plan from the Executive Officer.

10. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall

be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain workplans for investigations and studies, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by Valley Water shall bear the professional's signature and stamp.

11. Valley Water shall submit a new, complete RWD in accordance with the Water Code section 13260 at least 140 days prior to any material change or proposed change in the character, location, or volume of the discharge, including any expansion of the facility or development of any treatment technology.

12. Valley Water shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports. On or before each report due date, Valley Water shall submit the specified document to the Central Valley Water Board or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, then Valley Water shall state the reasons for such noncompliance and provide an estimate of the date when Valley Water will be in compliance. Valley Water shall notify the Central Valley Water Board in writing when it intends to return to compliance with the time schedule. Violations may result in enforcement action, including Central Valley Water Board or court orders requiring corrective action or imposing civil monetary liability, or in termination of coverage under this Order.

13. Valley Water shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by Valley Water to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems installed by Valley Water when necessary to achieve compliance with the conditions of this Order.

14. Valley Water shall use the best efforts including proper operation and maintenance, to comply with this Order.

15. At least 90 days prior to termination or expiration of any lease, contract, or agreement involving disposal or off-site use of effluent, used to justify the capacity authorized herein and assure compliance with this Order, Valley Water shall notify the Central Valley Water Board in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this Order.

16. In the event of any change in control or ownership of the facility, Valley Water must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

17. To assume transfer operation to a successor under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of coverage under the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provisions section B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the CWC. If the transfer of ownership letter is complete, the Central Valley Water Board Executive Officer will authorize coverage under this Order by issuance of an order of the Central Valley Water Board.

18. A copy of this Order including the Information Sheet, MRP, Standard Provisions, and Attachment A shall be kept at the facility or in another location for easy reference by operating personnel. Key operating personnel shall be familiar with its contents.

19. The Central Valley Water Board will review this Order periodically and will revise requirements when necessary.

20. Coverage under this Order is effective upon adoption by the Regional Board.

21. Valley Water shall create, maintain for five years, and make available to the Central Valley Water Board upon request by the Executive Officer any reports or records required by this Order, including those required under Monitoring and Reporting Program R5-2018-0808.

22. If more or less stringent applicable water quality standards are adopted in the Basin Plans, the Central Valley Water Board may revise and modify this Order in accordance with such standards.

23. This Order may be reopened to address any changes in state plans, policies, or regulations that would affect the water quality requirements for the discharges and as authorized by state law. This includes regulatory changes that may be brought about by the CV-SALTS planning efforts and Basin Plan Amendments.

If, in the opinion of the Executive Officer, Valley Water fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability by the Central Valley Water Board up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. In addition, where there is discharge, Central Valley Water Board can assess up to $10 per gallon multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law. Civil liability may be imposed by the superior court for up to $25,000 for each day of violation and in addition where there is discharge, up to an additional $25 per gallon multiplied by the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and CCR, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

I, PATRICK PULUPA, Executive Officer, do hereby certify that the foregoing is a full true and correct copy of this Order adopted by the California Regional Water Quality Control Board on June 7, 2019.

PATRICK PULUPA, Executive Officer

Attachments:

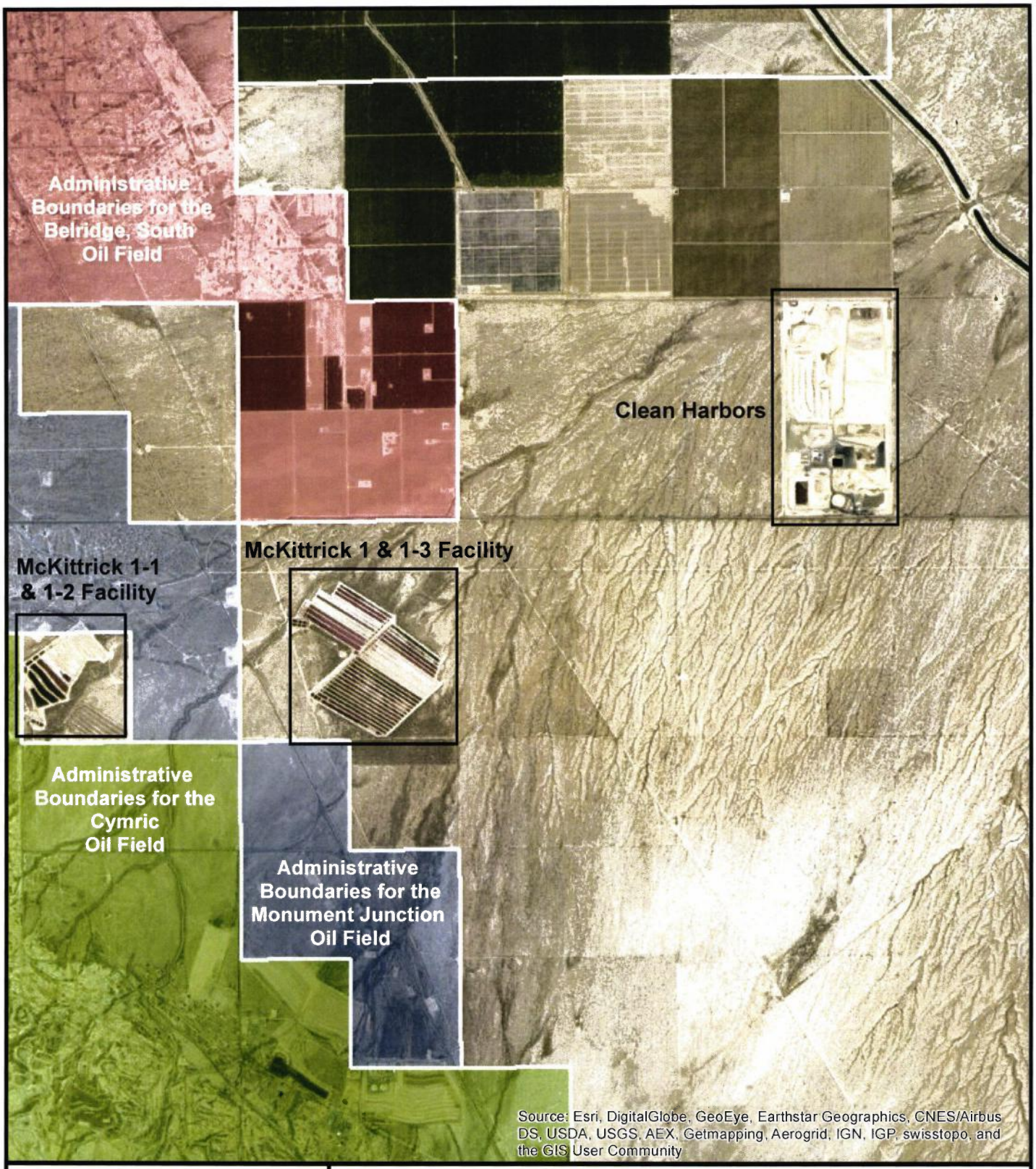
A – Aerial Photographs

N

0 0.5 1 2 3 Miles

EXTENDED VIEW OF THE MCKITTRICK 1 & 1-3 FACILITY
TENTATIVE CEASE AND DESIST ORDER NO. R5-2019-XXXX
FOR
VALLEY WATER MANAGEMENT COMPANY
MCKITTRICK 1 & 1-3 FACILITY
KERN COUNTY

ATTACHMENT A



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0 0.275 0.55 1.1 Miles

SITE MAP OF THE MCKITTRICK 1 & 1-3 FACILITY AND PROXIMITY TO OIL FIELDS

TENTATIVE CEASE AND DESIST ORDER NO. R5-2019-XXXX
FOR
VALLEY WATER MANAGEMENT COMPANY
MCKITTRICK 1 & 1-3 FACILITY
KERN COUNTY

ATTACHMENT A